

US EPA ARCHIVE DOCUMENT

Casino Smoking Study

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Introduction

- Goal to see if the Air Quality in casino improved
- See what the proportion of people in Smoking vs Non-Smoking
- How many cigarettes are smoked in an hour at our casino?

Background

- Past Study
- Casino currently under renovation
- Timeline 5 months, with 30 days over the time.
 - Three times a week, three weeks a month

Project Design/Methods

- Counting Cigarette Butts
 - Hourly
- Counting people in smoking and non-smoking sections
 - Occupancy
- Ultra fine particulate levels
 - Balanced building
- Surveys
 - Getting information on customers

Counting Cigarette Butts

- Partnered with casino house keeping
- The first collection
- 12 hours - 10,000 butts one long day
- incomplete number per hour

Amount of People in Casino

- How many people were in the Smoking vs Non-Smoking sections
- 5 different shifts 30 collection points
- Averaging data with the cigarette butt information
- Smokers on average smoked 7.2 cigarettes per hour

Ultra fine particulate levels

- UFP levels as a metric for balancing air flows.

Smoking	Non-Smoking	Hallway
13308	9411	14491

- Averages for areas ^
- The balance kept switching.
- when busy it was fine, but when it was slow it was off.

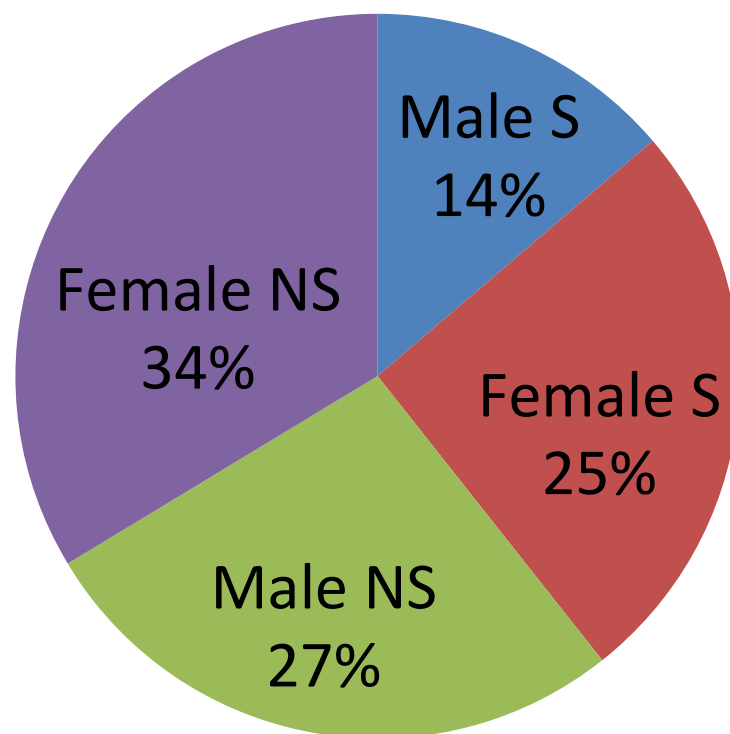
Surveys

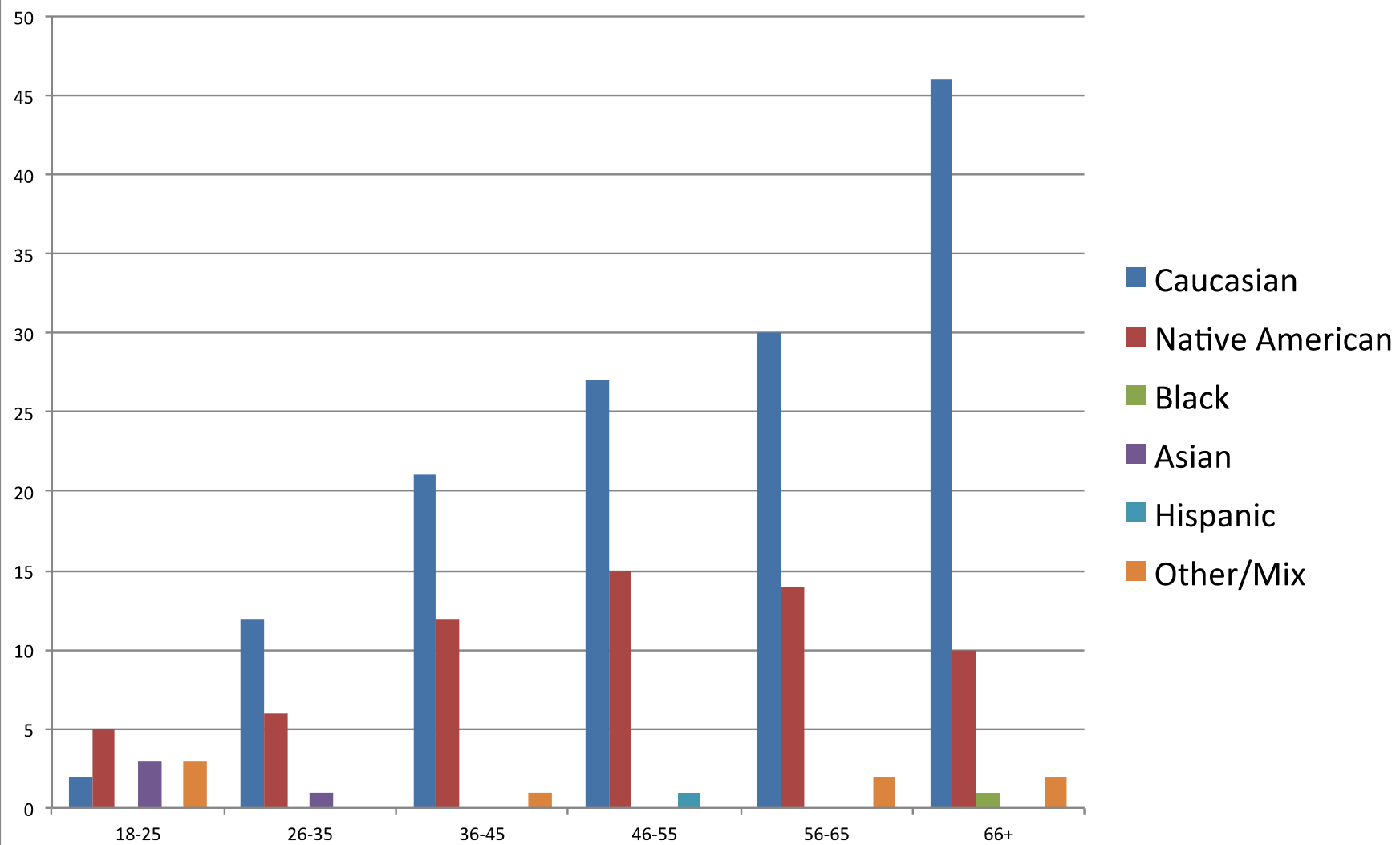
- I sent out 300 surveys/200 received
- I asked 6 questions
- Left at guest services
- No incentives

Demographics

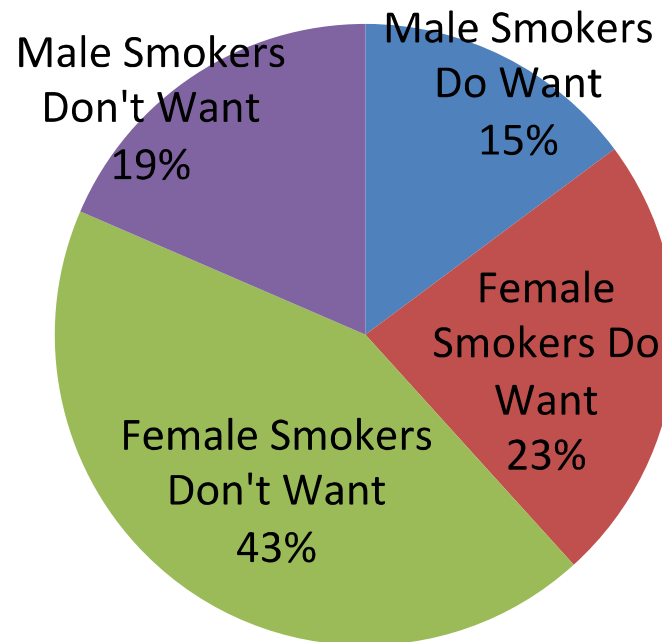
Males	Females	
86	125	
Caucasian	Native American	Other
137	61	14
Age - 61 + years	18-25 years	
61	13	
Smokers	Non-Smokers	
86	131	

Smokers vs Non Smokers

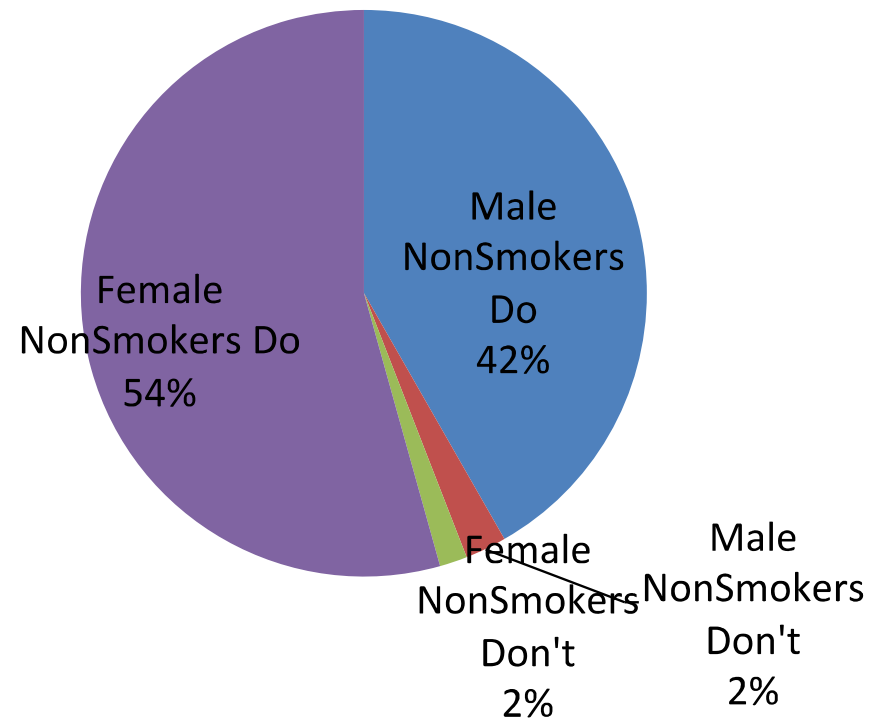




Smokers for Non Smoking Section



Non Smokers for Non Smoking Section



Conclusion

- On average there are about 7.2 cigarettes smoked per customer an hour
- Our casino is on average is 13% at capacity
- The air balance in our casino is off when not busy but fine when busy
- Our customer base is mostly Caucasian with it peaking at the oldest and NA curving off towards the end
- There seems to be more Non-smokers than smokers, and 38% of smokers would like a non smoking section.

Questions?